

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G11B27/32 G11B20/12 G11B20/18

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G11B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 971 349 A (HITACHI LTD) 12 January 2000 (2000-01-12) abstract paragraphs '0009! - '0012! paragraphs '0016! - '0024! figures 2-8	1,7-9
A	EP 0 965 988 A (SAMSUNG ELECTRONICS CO LTD) 22 December 1999 (1999-12-22) abstract paragraphs '0001! - '0015! paragraphs '0049! - '0082! figures 1-7	1,7-9
	----- -/--	

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

26 October 2004

Date of mailing of the international search report

14/02/2005

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Sucher, R

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	PATENT ABSTRACTS OF JAPAN vol. 1998, no. 09, 31 July 1998 (1998-07-31) & JP 10 092149 A (SONY CORP), 10 April 1998 (1998-04-10) abstract -----	1,7-9
A	EP 0 464 811 A (MATSUSHITA ELECTRIC IND CO LTD) 8 January 1992 (1992-01-08) paragraph '000A! column 4, line 33 - line 44 column 5, line 23 - column 7, line 40 figures 1-3 -----	1,7-9

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
EP 0971349	A	12-01-2000	JP	2000021087 A		21-01-2000
			EP	0971349 A2		12-01-2000
			KR	2000011324 A		25-02-2000
			TW	509890 B		11-11-2002
EP 0965988	A	22-12-1999	KR	2000005588 A		25-01-2000
			BR	9902261 A		21-03-2000
			CN	1320917 A		07-11-2001
			CN	1320925 A		07-11-2001
			CN	1239292 A		22-12-1999
			EP	1315163 A2		28-05-2003
			EP	1308950 A2		07-05-2003
			EP	1308951 A2		07-05-2003
			EP	1306840 A2		02-05-2003
			EP	1306841 A2		02-05-2003
			EP	0965988 A2		22-12-1999
			ID	23487 A		27-04-2000
			JP	2000036161 A		02-02-2000
			JP	2001143400 A		25-05-2001
			JP	2002197788 A		12-07-2002
			JP	2002197789 A		12-07-2002
			JP	2002197790 A		12-07-2002
			JP	2004265590 A		24-09-2004
			RU	2212062 C2		10-09-2003
			RU	2225043 C1		27-02-2004
			SG	91819 A1		15-10-2002
			SG	104336 A1		21-06-2004
			TW	452770 B		01-09-2001
			US	2002075792 A1		20-06-2002
			US	2002067673 A1		06-06-2002
			US	2002089919 A1		11-07-2002
			US	2002176341 A1		28-11-2002
			US	6724705 B1		20-04-2004
			US	6765853 B1		20-07-2004
			US	6744713 B1		01-06-2004
			US	2004190411 A1		30-09-2004
JP 10092149	A	10-04-1998	NONE			
EP 0464811	A	08-01-1992	JP	2776006 B2		16-07-1998
			JP	4067471 A		03-03-1992
			DE	69127776 D1		06-11-1997
			DE	69127776 T2		19-03-1998
			EP	0464811 A2		08-01-1992
			US	5270877 A		14-12-1993